WHY MICHIGAN NEEDS ENERGY OPTIMIZATION:

ENERGY EFFICIENCY AS A RESOURCE FOR MICHIGAN

Presentation to the Senate Energy and Technology Committee
by
Martin Kushler, Ph.D.
Senior Fellow
American Council for an Energy-Efficient Economy
October 2011

CONGRATULATIONS TO MICHIGAN!

In the forthcoming ACEEE ***2011 State Energy Efficiency Scorecard***, Michigan will be recognized as the "most improved state" in the nation....rising from 27th to 17th. In particular, the report cites the importance of Michigan's 2008 legislation [PA 295]:

Michigan is "***reaping the rewards from Energy Efficiency Resource Standards (EERS) passed in 2008, which requires the state's utilities to provide portfolios of energy efficiency programs sufficient to meet a specific energy savings target that ramps up over time.***" (p. viii)

[Congratulations to the Michigan legislature, which passed PA295 in 2008 with strong bi-partisan majorities in the Senate (26-10) and House (83-24)]

REASONS WHY ENERGY EFFICIENCY HAS ENJOYED STRONG BIPARTISAN SUPPORT

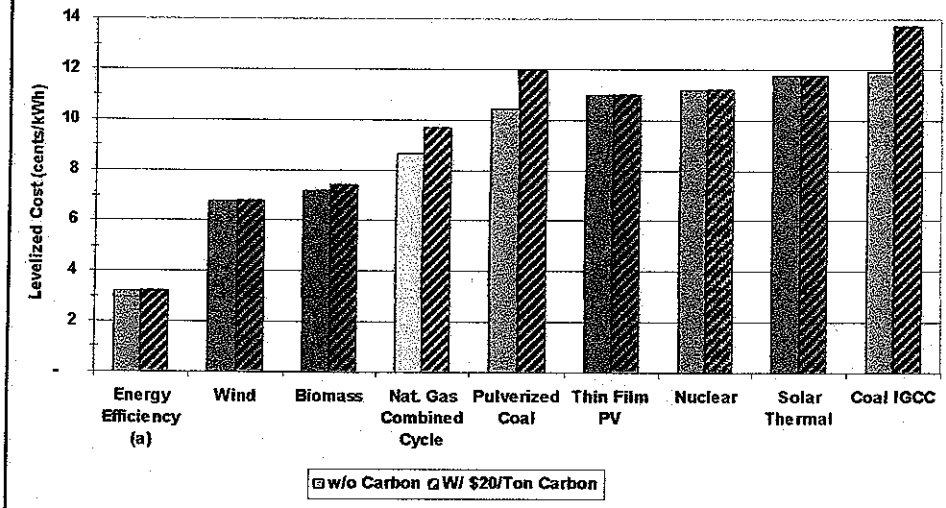
1. It's the lowest-cost energy resource
2. Reduces dollar drain for imported fuels
3. Creates jobs in the local economy
4. Has strong public support

KEY POINT #1:

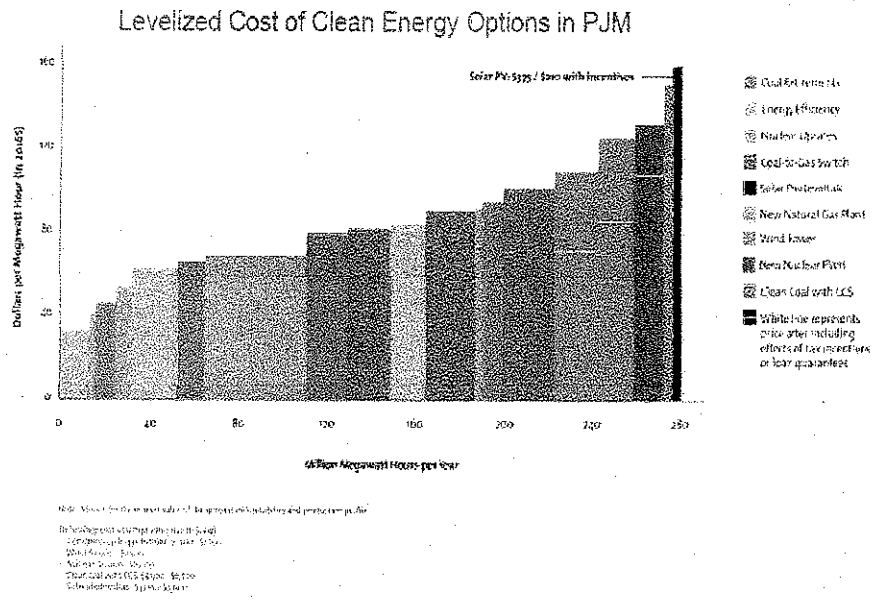
ENERGY EFFICIENCY IS BY FAR THE CHEAPEST SOURCE OF NEW ENERGY SUPPLY

[We can save electricity for about one-third the cost of producing it through a new power plant]

Cost of New Electricity Resources



Source: Lazard 2008 for NARUC (midpoint of range)



THE MICHIGAN LEGISLATURE RECOGNIZEDTHIS COST SAVINGS ADVANTAGE OF ENERGY EFFICIENCY WHEN IT PASSED PA 295

"The overall goal of an energy optimization plan shall be to reduce the future costs of provider service to customers. ***In particular, an EO plan shall be designed to delay the need for constructing new electric generating facilities*** *and thereby protect consumers from incurring the costs of such construction."*

(PA 295, Section71)

MI 21ST CENTURY PLAN CONCLUSIONS

"By displacing traditional fossil fuel energy, **the energy efficiency program alone could save Michigan $3 billion in electricity costs over the next 20 years**. These results compare favorably to other statewide energy efficiency programs."

RATIONALE FOR ENERGY EFFICIENCY AS A UTILITY SYSTEM RESOURCE

SIMPLY STATED:

- Utility systems need to have adequate supply resources to meet customer demand
- To keep the system in balance, you can add supply resources, reduce customer demand, or a combination of the two
- In virtually all cases today, it is much cheaper to reduce customer demand than to acquire new supply resources

  [True for electricity and natural gas]

UTILITY ENERGY EFFICIENCY PROGRAMS HAVE BEEN SHOWN TO BE VERY COST-EFFECTIVE

In ACEEE's latest analysis*, we reviewed the reported results from 14 states with large-scale utility funded energy efficiency programs.

The average cost per kWh saved was 2.5 cents.

---

* *Saving Energy Cost-Effectively: A National Review of the Cost of Energy Saved through Utility-Sector Energy Efficiency Programs,* ACEEE, Sept. 2009
http://www.aceee.org/research-report/u092

KEY POINT #2:
ENERGY IMPORT COSTS ARE A MAJOR BURDEN ON THE MICHIGAN ECONOMY

- **Michigan is almost totally dependent on fuels imported from other states and countries**

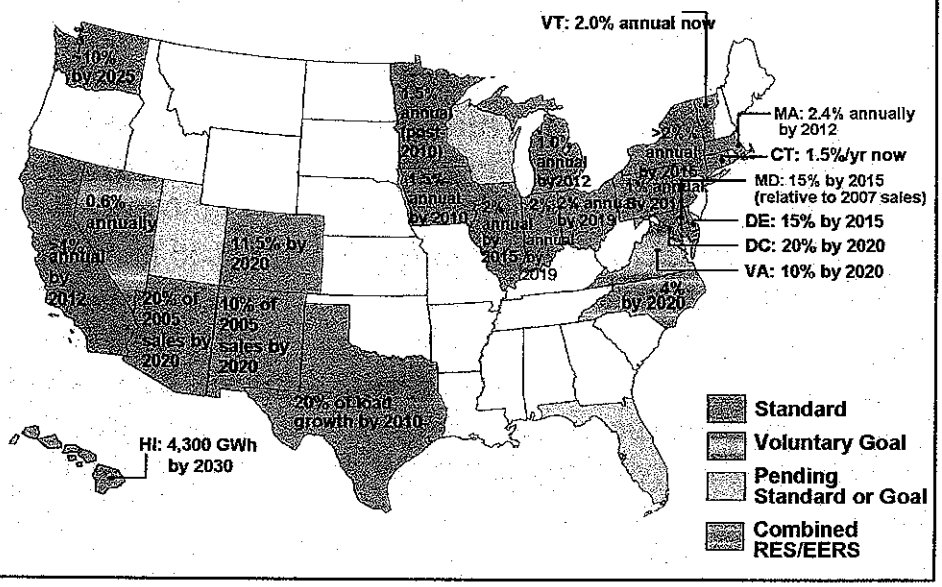
  We import:

  – 100% of the coal we use
  – 100% of the uranium
  – 96% of oil & petroleum products
  – 70% of the natural gas

- **The total dollar drain from the Michigan economy for imported fuels is ~ $25 billion per year**

Every dollar we don't spend on imported fuels is a dollar we can keep circulating in the Michigan economy

Energy Efficiency Resource Standards
22 States –February 2010



KEY POINT #3:
ENERGY EFFICIENCY IS MICHIGAN'S BEST OPPORTUNITY FOR ECONOMIC DEVELOPMENT

THE ECONOMIC 'TRIPLE PLAY'

Energy Efficiency is the only resource that boosts the economy and provides jobs in 3 key ways:

1. Direct employment in delivering the EE
2. Local re-spending of saved energy dollars
3. Reduced energy costs for all ratepayers
   - Cheapest resource for the utility system
   - Downward pressure on market energy prices

HOW ***LOCAL COMMUNITIES*** BENEFIT FROM UTILITY SECTOR ENERGY EFFICIENCY PROGRAMS

- **Direct local employment** (installers, electricians, skilled trades, service occupations and retail)
- **Direct savings on utility bills for customers participating** in the energy efficiency programs (10-30% savings is possible)
- Indirect benefit from **reduced dollar drain from the community** (i.e., re-spending of the $ savings by customers)
- **Reduced air emissions** from fossil fuel combustion (& urban areas tend to have the most serious air quality problems …NOx, ozone, smog, mercury, particulates)

KEY POINT #4:
THERE IS STRONG PUBLIC SUPPORT FOR ENERGY EFFICIENCY

- Surveys consistently show that energy efficiency is the highest rated energy source by the public
- A statewide survey by the Institute for Public Policy Research at Michigan State University in the year PA 295 passed found that 90% of the public agreed that "the state should require utilities to promote energy efficiency"

PA 295 is an excellent example of policymaker action reflecting public preferences for energy policy

CONCLUSIONS

- Michigan has a huge energy cost problem....especially with "dollar drain" for importing energy fuels
- Energy Efficiency is the cheapest, fastest, and cleanest new energy resource
- Michigan has huge reserves of 'untapped' energy efficiency potential (we have a relatively old and inefficient building and equipment stock)
- Energy Efficiency provides substantial local economic benefits. Every bit of efficiency must be "mined" from Michigan homes, businesses, and public facilities....and energy efficiency jobs cannot be "outsourced".
- Energy efficiency as a state policy is very popular with the public
- PA 295 has been a very successful policy to capture energy efficiency, and the Michigan legislature should be congratulated for enacting that legislation.